

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) A method of bone cement preparation from a polymeric powder and a liquid component, comprising a polymerisable monomer or comonomer, by action of a catalytic system, whereby particles of said powder component are packed in a powder container (7;35) with an inlet port (8) and an outlet port (9) and the liquid component is held in a liquid container (11), comprising the steps of:

- A) completely filling said powder container (7;35) with said polymeric powder;
- B) connecting said liquid container (11) to said inlet port (8);
- C) connecting a vacuum source (10) to said outlet port (9); and,
- D) completely flooding a void space between said particles of said powder component with said liquid component, said liquid component flowing from said inlet port (8) in toward said outlet port (9) by the action of the vacuum source (10).

2. (Amended) A method of bone cement preparation from a polymeric powder and a liquid component, comprising a polymerisable monomer or comonomer, by action of a catalytic system, whereby particles of said powder component are packed in a powder container (7;35) with an inlet port (8) and an outlet port (9) and the liquid component is held in a liquid container (11), comprising the steps of:

- A) packing said powder in said powder container (7;35) to a fractional porosity of 0.30 to 0.43;
- B) connecting the liquid container (11) to said inlet port (8);
- C) connecting a vacuum source (10) to said outlet port (9); and,

D) flooding the void space between said particles of said powder component by said liquid component, said liquid component flowing from said inlet port (8) toward said outlet port (9) by the action of the vacuum source (10).

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3. (Amended) The method according to claim 1, wherein the catalytic system comprises benzoyl peroxide, said benzoyl peroxide being preferably contained within said particles.

4. (Amended) The method according to claim 1, wherein said upstream inlet port (8) and said downstream outlet port (9) of said container (7) allow air and liquid to pass thereby, but not powder.

5. (Amended) The method according to claim 1, wherein said powder container (7;35) is inflexible and in the form of a syringe (13).

6. (Amended) The method according to claim 1, wherein said powder in said powder containing compartment (35) is packed to a fractional porosity of 0.34 to 0.38.

7. (Amended) The method according to claim 6, wherein said powder in said powder containing compartment (35) is packed to a fractional porosity of 0.35 to 0.37.

8. (Amended) The method according to claim 1, wherein said powder component is flooded by said liquid component in 15 to 60 seconds.

9. (Amended) The method according to claim 8, wherein said powder component is flooded by said liquid component in 25 to 35 seconds.

10. (Amended) The method according to claim 1, wherein the flow of said liquid component is controlled by a valve (12) interposed between said liquid container (11) and said inlet port (8).

11. (Amended) The method according to claim 1, wherein flooding of said powder component by said liquid component is followed by swelling, draining of excess liquid component and extrusion of the mixed components.

12. (Amended) The method according to claim 11, wherein said draining of excess liquid is effected by a piston (39) contained in a vacuum pump (37).

13. (Amended) The method according to claim 1, wherein said inlet port (8) comprises a mesh (19) which prevents passage of said powder particles, but allows passage of said liquid.

14. (Amended) The method according to claim 1, wherein said outlet port (9) comprises a narrow gap (25) that substantially blocks passage of said powder particles, but allows for passage of air and said liquid.

15. (Amended) The method according to claim 14, wherein the narrow gap (25) is smaller than 50 μ .

16. (Amended) The method according to claim 14, wherein the narrow gap (25) is smaller than 3 times an average diameter of said particles of said powder component.

17. (Amended) The method according to claim 1, wherein said polymerisable monomer or comonomer comprises methyl-methacrylate, ethyl-methacrylate or butyl-methacrylate or mixtures thereof.

18. (Amended) The method according to claim 1, wherein said vacuum source (10) generates a vacuum in the range of 10 to 200 mbar.

19. (Amended) The method according to claim 18, wherein the vacuum source (10) generates a vacuum in the range of 50 to 100 mbar.

20. (Amended) A bone cement mixture obtained by the method according to claim 1.

21. (Amended) An apparatus for performing the method according to claim 1,

comprising:

- A) a powder container (7) with an inlet port (8) and an outlet port (9), said powder container (7;35) being completely filled with a polymeric powder;
- B) a liquid container (11) containing a liquid component comprising a polymerisable monomer or comonomer; whereby
- A¹ C) said liquid container (11) is connectable to said inlet port (8);
- D) said outlet port (9) is connectable to a vacuum source (10); and;
- E) a void space between said particles of said powder component is floodable by said liquid component through said inlet port (8) in the direction of said outlet port (9) by the action of a vacuum source (10).

22. (Amended) An apparatus for performing the method according to claim 1,

comprising:

- A) a powder container (7) with an inlet port (8) and an outlet port (9), said powder container (7;35) containing a polymeric powder, whereby said powder in said powder container (7;35) is packed to a fractional porosity of 0.30 to 0.43;
- B) a liquid container (11) containing a liquid component comprising a polymerisable monomer or comonomer; whereby
- C) said liquid container (11) is connectable to said inlet port (8);
- D) said outlet port (9) is connectable to a vacuum source (10); and;
- E) wherein a void space between said particles of said powder component is floodable by said liquid component through said inlet port (8) in the direction of said outlet port (9) by the action of the vacuum source (10).

23. (Amended) The apparatus according to claim 21, wherein it comprises the vacuum source (10).

A/ 24. (Amended) Apparatus according to claim 23, wherein said vacuum source (10) is an evacuated can (44).

25. (Amended) Apparatus according to claim 23, wherein said vacuum source (10) is an evacuated piston (45).

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